99. FOODS AND BEVERAGES

426-2

1878

~~1878~~

Stunned but alive

27. UNDERTAKING, Embalming.

RECORDED

230.118

~~159~~

A.D. 1878, 25th April. N° 1656.

Killing Animals, and Preserving their Flesh.

LETTERS PATENT to Richard Jones, of Berkeley, in the County of Gloucester, Medical Practitioner, for the Invention of "IMPROVEMENTS IN KILLING ANIMALS INTENDED FOR HUMAN FOOD, AND PRESERVING THE FLESH OF SUCH ANIMALS."

Sealed the 18th October 1878, and dated the 25th April 1878.

See Williams' Chem. of Cooking 1885 p 170

PROVISIONAL SPECIFICATION left by the said Richard Jones at the Office of the Commissioners of Patents on the 25th April 1878.

RICHARD JONES, of Berkeley, in the County of Gloucester, Medical Practitioner. "IMPROVEMENTS IN KILLING ANIMALS INTENDED FOR HUMAN FOOD, AND PRESERVING THE FLESH OF SUCH ANIMALS."

My Invention consists essentially in taking advantage of the pulsating or circulating action of the heart of an animal after it has been rendered insensible to pain by a blow on the forehead or otherwise, to equally distribute the preservative substances through the system of the animal, and thus prevent the decay of the flesh intended for food.

The advantage likely to result from my improvement is the facility of preserving meat during hot weather, and the obtaining of large supplies of good butchers' meat at a great reduction in price, America, Australia, and other distant countries being rendered available sources of supply.

In carrying my Invention into practice, I proceed in manner following:—The animal is first stunned by a blow on the head with a poleaxe or otherwise; the jugular vein, or other principal blood vessel, is then compressed at some convenient spot, whereby the same becomes distended, and a trocar with a canula or an aspirator needle is thrust into, but not through, the said vein or blood vessel at a point further from the heart than the point of compression, and in the direction of the heart; and if the trocar and canula be used the trocar is withdrawn, so as to leave the canula in the vein, and the blood of the animal then flows out through the canula or aspirator needle to any desired extent. The preserving substance in a fluid form maintained at or about blood heat is contained in a vessel

[*Price* 4*d*.]

78

conveniently placed above the level of the animal, and provided with a stop-cock, to which is attached or secured a flexible tube fitted with an end piece of metal, or other hard substance, which must be made to fit into the canula or aspirator needle above mentioned.

When all is ready for the operation the stop-cock from the vessel is opened, and the preserving liquid is allowed to flow gently through the flexible tube until all the air is expelled, and the end piece of the tube is then thrust into the canula or aspirator needle whilst full of blood, flowing through the animal, so that no air may be in the tube or canula, and the pressure on the vein is then removed, and a stream of the fluid is forced by its own weight slowly into the vein; the height of the vessel containing the preserving fluid above the animal or the pressure being varied according to circumstances.

When the requisite quantity of the fluid has passed into the vein and a period of five to ten minutes, according to the size of the animal, has been allowed to pass, so that the preservative may be distributed throughout the whole body, a bubble of air is forced through the same flexible tube or canula into the vein or blood vessel, whence it passes to the heart of the animal, and life immediately ceases.

After a few minutes have elapsed the large vessels of the neck are divided in the manner usually adopted by butchers, and the blood is allowed to escape.

The air to cause death may be contained in a small india-rubber ball attached to the flexible tube or canula or aspirator needle, or it may be injected by other means in any convenient manner.

The preserving fluid I use is made by dissolving in distilled or rain water at a high temperature, either boracic acid or salicylic acid, or a mixture of the two, in the proportions of about ~~six drams of boracic acid~~ if used by itself, or five drams of boracic acid with one of salicylic acid and eight ounces of water, and the temperature must be gradually allowed to fall to, but not below, blood heat. The solution should be agitated during the operation to prevent deposit of crystals.

Two fluid drams of this solution contain about eleven grains of the acid, and will be rather more than sufficient to preserve one pound weight of an animal, or a sheep weighing seventy-two pounds would require as a maximum sixteen ounces of the solution to be injected to secure effectual preservation.

If the animal has been fasting for twenty-four hours I make no allowance whatever for the contents of the intestines, but make my calculation of the quantity of acid required by taking the gross weight of the animal.

Butchers, immediately after an animal has been slaughtered and skinned, wash the surface with warm water. I prefer that water for that purpose should have been previously boiled, and a small quantity of the above solution added to the water.

In order to prevent the growth of mould or fungi, when the preserved flesh is to be kept a long time, it would be desirable to protect the surface; and for this purpose I melt vaseline or cosmoline, and with a soft brush paint over the surface of the carcase, and thus lessen the evaporation of moisture, and protect the surface from atmospheric influence; or the carcase may be dipped into melted vaseline or cosmoline, and the excess allowed to drain off.

The leading features of novelty under my Invention are,—

(1.) Killing animals in the manner, by the means and agents, in the order hereinbefore described.

(2.) Employing boracic and salicylic acids, or either of them, in the killing of animals for the purpose of preserving the edible portions, as set forth.

And (3.) Using boracic and salicylic acids, or either of them, for coating the edible portions of animals killed under my said Invention.

3. Using boracic and salicylic acid, or either of them, for coating the edible portions of animals killed under my said Invention.

In witness whereof, I, the said Richard Jones, have hereunto set my hand and seal, the Twenty-second day of October, in the year of our Lord One thousand eight hundred and seventy-eight.

RICH^{D}. JONES. (L.S.)

LONDON: Printed by George Edward Eyre and William Spottiswoode,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

1878.

426-2

"Injected While Alive"

1878

A.D. 1878, 25th April. N° 1656.

Killing Animals, and Preserving their Flesh.

LETTERS PATENT to Richard Jones, of Berkeley, in the County of Gloucester, Medical Practitioner, for the Invention of "IMPROVEMENTS IN KILLING ANIMALS INTENDED FOR HUMAN FOOD, AND PRESERVING THE FLESH OF SUCH ANIMALS."

Sealed the 18th October 1878, and dated the 25th April 1878.

PROVISIONAL SPECIFICATION left by the said Richard Jones at the Office of the Commissioners of Patents on the 25th April 1878.

RICHARD JONES, of Berkeley, in the County of Gloucester, Medical Practitioner. "IMPROVEMENTS IN KILLING ANIMALS INTENDED FOR HUMAN FOOD, AND PRESERVING THE FLESH OF SUCH ANIMALS."

My Invention consists essentially in taking advantage of the pulsating or circulating action of the heart of an animal after it has been rendered insensible to pain by a blow on the forehead or otherwise, to equally distribute the preservative substances through the system of the animal, and thus prevent the decay of the flesh intended for food.

The advantage likely to result from my improvement is the facility of preserving meat during hot weather, and the obtaining of large supplies of good butchers' meat at a great reduction in price, America, Australia, and other distant countries being rendered available sources of supply.

In carrying my Invention into practice, I proceed in manner following:—The animal is first stunned by a blow on the head with a poleaxe or otherwise; the jugular vein, or other principal blood vessel, is then compressed at some convenient spot, whereby the same becomes distended, and a trocar with a canula or an aspirator needle is thrust into, but not through, the said vein or blood vessel at a point further from the heart than the point of compression, and in the direction of the heart; and if the trocar and canula be used the trocar is withdrawn, so as to leave the canula in the vein, and the blood of the animal then flows out through the canula or aspirator needle to any desired extent. The preserving substance in a fluid form maintained at or about blood heat is contained in a vessel conveniently placed above the level of the animal, and provided with a stop-cock, to which is attached or secured a flexible tube fitted with an end piece of metal, or other hard substance, which must be made to fit into the canula or aspirator needle above mentioned.

When all is ready for the operation the stop-cock from the vessel is opened, and the preserving liquid is allowed to flow gently through the flexible tube until all the air is expelled, and the end piece of the tube is then thrust into the canula or aspirator needle whilst full of blood, flowing through the animal, so that no air may be in the tube or canula, and the pressure on the vein is then removed, and a stream of the fluid is forced by its own weight slowly into the vein; the height of the vessel containing the preserving fluid above the animal or the pressure being varied according to circumstances.

When the requisite quantity of the fluid has passed into the vein and a period of five to ten minutes, according to the size of the animal, has been allowed to pass, so that the preservative may be distributed throughout the whole body, a bubble of air is forced through the same flexible tube or canula into the vein or blood vessel, whence it passes to the heart of the animal, and life immediately ceases.

After a few minutes have elapsed the large vessels of the neck are divided in the manner usually adopted by butchers, and the blood is allowed to escape.

The air to cause death may be contained in a small india-rubber ball attached to the flexible tube or canula or aspirator needle, or it may be injected by other means in any convenient manner.

The preserving fluid I use is made by dissolving in distilled or rain water at a high temperature, either boracic acid or salicylic acid, or a mixture of the two, in the proportions of about six drams of boracic acid if used by itself, or five drams of boracic acid with one of salicylic acid and eight ounces of water, and the temperature must be gradually allowed to fall to, but not below, blood heat. The solution should be agitated during the operation to prevent deposit of crystals.

Two fluid drams of this solution contain about eleven grains of the acid, and will be rather more than sufficient to preserve one pound weight of an animal, or a sheep weighing seventy-two pounds would require as a maximum sixteen ounces of the solution to be injected to secure effectual preservation.

If the animal has been fasting for twenty-four hours I make no allowance whatever for the contents of the intestines, but make my calculation of the quantity of acid required by taking the gross weight of the animal.

Butchers, immediately after an animal has been slaughtered and skinned, wash the surface with warm water. I prefer that water for that purpose should have been previously boiled, and a small quantity of the above solution added to the water.

In order to prevent the growth of mould or fungi, when the preserved flesh is to be kept a long time, it would be desirable to protect the surface; and for this purpose I melt vaseline or cosmoline, and with a soft brush paint over the surface of the carcase, and thus lessen the evaporation of moisture, and protect the surface from atmospheric influence; or the carcase may be dipped into melted vaseline or cosmoline, and the excess allowed to drain off.

The leading features of novelty under my Invention are,—

(1.) Killing animals in the manner, by the means and agents, in the order hereinbefore described.

(2.) Employing boracic and salicylic acids, or either of them, in the killing of animals for the purpose of preserving the edible portions, as set forth.

And (3.) Using boracic and salicylic acids, or either of them, for coating the edible portions of animals killed under my said Invention.

SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said Richard Jones in the Great Seal Patent Office on the 25th October 1878.

RICHARD JONES, of Berkeley, in the County of Gloucester, Medical Practitioner. "IMPROVEMENTS IN KILLING ANIMALS INTENDED FOR HUMAN FOOD, AND PRESERVING THE FLESH OF SUCH ANIMALS."

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In carrying my Invention into practice I proceed in manner following:—The animal is first stunned by a blow on the head with a polaxe or otherwise; the jugular vein or other principal blood vessel is then compressed at some convenient spot, whereby the same becomes distended, and a trocar with a canula or an aspirator needle is thrust into, but not through, the said vein or blood vessel at a point further from the heart than the point of compression, and in the direction of the heart; and if the trocar and canula be used the trocar is withdrawn, so as to leave the canula in the vein, and the blood of the animal then flows out through the canula or aspirator or needle to any desired extent. The preserving substance in a fluid form, maintained at or about blood heat, is contained in a vessel conveniently placed above the level of the animal, and provided with a stop-cock, to which is attached or secured a flexible tube fitted with an end piece of metal, or other hard substance, which must be made to fit into the canula or aspirator needle above mentioned.

When all is ready for the operation the stop-cock from the vessel is opened, and the preserving liquid is allowed to flow gently through the flexible tube until all the air is expelled, and the end piece of the tube is then thrust into the canula or aspirator needle whilst full of blood, flowing through the animal, so that no air may be in the tube or canula, and the pressure on the vein is then removed, and a stream of the fluid is forced by its own weight slowly into the vein; the height of the vessel containing the preserving fluid above the animal or the pressure being varied according to circumstances.

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The preserving fluid I use is made by dissolving in distilled or rain water at a high temperature, either boracic acid or salicylic acid, or a mixture of the two, in the proportions of about six drams of boracic acid if used by itself, or five drams of boracic acid with one of salicylic acid and eight ounces of water, and the temperature must be gradually allowed to fall to, but not below, blood heat; the solution should be agitated during the operation to prevent deposit of crystals. The dram here referred to consists of sixty grains.

Two fluid drams of this solution contain about eleven grains of the acid, and will be rather more than sufficient to preserve one pound weight of an animal, or a sheep weighing seventy-two pounds would require as a maximum sixteen ounces of the solution to be injected to secure effectual preservation.

If the animal has been fasting for twenty-four hours I make no allowance whatever for the contents of the intestines, but make my calculation of the quantity of the acid required by taking the gross weight of the animal.

Butchers, immediately after an animal has been slaughtered and skinned, wash the surface with warm water. I prefer that water for that purpose should have been previously boiled, and a small quantity of the above solution added to the water.

In order to prevent the growth of mould or fungi, when the preserved flesh is to be kept a long time, it would be desirable to protect the surface; and for this purpose I melt vaseline or cosmoline, and with a soft brush paint over the surface of the carcase, and thus lessen the evaporation of moisture, and protect the surface from atmospheric influence; or the carcase may be dipped into melted vaseline or cosmoline, and the excess allowed to drain off.

It will be evident that modifications of my Invention may be made without departing from the leading features, as, for instance, instead of rendering an animal insensible to pain by a blow, blood may first be abstracted in the usual way by opening a vein on the opposite side of the neck to that in which the fluid is introduced.

Again, the quantity of water added to the antiseptic may be more or less, according to circumstances.

Where the object is to effect the preservation of animals to be brought from distant countries the quantity of the antiseptic may vary from ten to thirty grains to the pound of the animal; and in cases where it is desirable to import or export whole carcases of animals from or to distant countries, in order to the more effectually protecting the surface of the animal, it is desirable to allow the skin to remain on the carcase; and, an opening being made into the cavity of the abdomen, the whole of the intestines can be removed from the throat to the anus, and, the surface being well washed out, the surfaces of the opening can be brought together, either by sewing or in any other convenient way (the rectum being tied and also the œsophagus if requisite), except a small opening through which gelatine made from the refuse portions of the animal, and during its manufacture charged with boracic acid, or boracic acid combined with salicylic acid, thus putting it into a preservent state, can be introduced into the animal in a fluid state, but which on cooling down becomes solid to any degree required, so as not to be rendered fluid in any temperature.

Further, the injection of the solution can take place without the abstraction of blood, and when injected the animal may be killed in the ordinary way adopted by butchers; but in this practice care should be taken to add to the solution an additional quantity of the antiseptic, so as to make up for its loss by the escape of blood.

Having now described and particularized my Invention, so that others will be enabled to practice the same, I claim,—

1. Killing animals in the manner, by the means and agents, in the order hereinbefore described.

2. Employing boracic and salicylic acids, or either of them, in the killing of animals for the purpose of preserving the edible portions, as set forth.

3. Using boracic and salicylic acid, or either of them, for coating the edible portions of animals killed under my said Invention.

In witness whereof, I, the said Richard Jones, have hereunto set my hand and seal, the Twenty-second day of October, in the year of our Lord One thousand eight hundred and seventy-eight.

RICH^{D}. JONES. (L.S.)

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LONDON: Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
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